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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,530	10/27/2003	Holger Richert	SANZ-251	1899

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EXAMINER	
BAUER, SCOTT ALLEN	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/694,530	RICHERT ET AL.	
	Examiner	Art Unit	
	Scott Bauer	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/1/4 5/25/5 11/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 15, 17 & 20 are objected to because of the following informalities:

the claims recite the limitation "each cathode" in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 10 & 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Berthaud et al. (US 6,625,736).

3. With regard to Claim 10, Berthaud et al., in Figure 1, discloses a configuration for n consumers (16, 18 & 20) of electric energy, of which m consumers are supplied simultaneously with energy, where m<n, comprising a modular energy supply (10, 12 & 14) comprising k energy modules, a control (22) which connects as many modular energy supplies with one consumer as are required for this consumer to receive the power it requires (column 3 lines 15-48).

4. With regard to Claim 12, Berthaud et al., in Figure 1, discloses the configuration as claimed in claim 10, wherein the electric energy is realized by DC current (column 1 lines 35-39).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 11, 14 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Sellers (US 5,584,974).

7. With regard to Claim 11, Berthaud et al. teaches the configuration as claimed in claim 10.

Berthaud et al. does not teach that the consumers are sputter installations, with each cathode of a sputter installation having its own arc management.

Sellers et al., teaches an arc control and switching element protection for a pulsed DC cathode sputtering power supply wherein a power supply provides power to a sputter installation, with each cathode of a sputter installation having its own arc management (column 4 lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Sellers, by using the power supply of Berthaud et al. to drive a plurality of cathode sputtering installations with arc management as taught by Sellers, for the purpose of providing power redundancy to the sputtering installations should one supply fail.

8. With regard to Claims 14 & 20, Berthaud et al. teaches the configuration as claimed in claim 10 and further that the electric energy is realized by DC current.

Berthaud et al. does not teach that the electric energy is realized by pulsed DC current or that a pulse generator is assigned to each cathode of a sputter installation.

Sellers, in Figure 1, teaches that a DC power supply can be converted to a pulse DC current by a pulse generator (18) assigned to a cathode.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Sellers, by using a pulse DC generator taught by Sellers to convert the DC current of the power supplies of Berthaud to pulsed DC current prior to sending the power to the load, for the purpose of allowing the device of Berthaud et al. to be used to power various types of loads thus increasing the robustness of the circuit.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Lau (US 5,444,333).

10. With regard to Claim 13, Berthaud et al. teaches the configuration as claimed in claim 10.

Berthaud et al. does not teach that the electric energy is realized by an AC current.

Lau, in Figure 1, teaches a circuit wherein the DC current of a DC power supply (12) is converted to AC current by an inverter (14) prior to being sent to the load (26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Lau, by using an inverter taught by Lau to convert the DC current of the power supplies of Berthaud to AC current prior to sending the power to the load, for the purpose of allowing the device of Berthaud et al. to be used to power various types of loads thus increasing the robustness of the circuit.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Mahler et al. (US 5,429,705).

12. With regard to Claim 15, Berthaud et al. teaches the configuration as claimed in claim 10.

Berthaud et al. does not teach that each cathode is provided with its own adaptation network.

Mahler et al. teaches an apparatus for coating and/or etching substrates in a vacuum chamber wherein the power input of the device is provided with an adaptation network (column 2 lines 43-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Mahler et al., by using the device of Berthaud et al. to power the adaptive network and sputter installation of Mahler et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Sellers et al. (US 5,584,974) as applied to claim 11 above and further in view of Mahler et al. (US 5,429,705).

14. With regard to Claim 16, Berthaud et al. in view of Sellers teaches the configuration as claimed in claim 11.

Berthaud et al. in view of Sellers does not teach that each cathode is provided with its own adaptation network.

Mahler et al. teaches an apparatus for coating and/or etching substrates in a vacuum chamber wherein the power input of the device is provided with an adaptation network (column 2 lines 43-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. in view of Sellers with

Mahler et al., by using the device of Berthaud et al. to power the sputter installation of Sellers with the adaptive network of Mahler et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

15. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Lau et al. (US 5,444,333) as applied to claim 13 above and further in view of Mahler et al. (US 5,429,705).

16. With regard to Claim 17, Berthaud et al. in view of Lau teaches the configuration as claimed in claim 13.

Berthaud et al. in view of Lau does not teach that each cathode is provided with its own adaptation network.

Mahler et al. teaches an apparatus for coating and/or etching substrates in a vacuum chamber wherein the power input of the device is provided with an adaptation network (column 2 lines 43-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. in view of Lau with Mahler et al., by using the device of Berthaud et al. and the inverter of Lau to power the sputter installation with the adaptive network of Mahler et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

17. Claims 18 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Milde et al. (US 6,420,863).

18. With regard to Claim 18, Berthaud et al. teaches the configuration as claimed in claim 10.

Berthaud et al. does not teach that the consumers are sputter installations with each installation including two cathodes to which one pole reversal unit is assigned.

Milde et al., in Figure 1A, teaches a method for monitoring an alternating current discharge on a double electrode wherein a power supply (5) is coupled to a switching unit wherein one cathode is coupled to a pole reversal unit.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Milde et al., by using the power supply device of Berthaud et al. to supply power to the sputter installation of Milde et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

19. With regard to Claim 19, Berthaud et al. teaches the configuration as claimed in claim 10.

Berthaud et al. does not teach that the consumer are sputter installations with each installation including two cathodes, of which the one cathode is connected to a pole of an AC voltage and the other cathode to the other pole of this AC voltage.

Milde et al., in Figure 1A, teaches a method for monitoring an alternating current discharge on a double electrode wherein the consumer are sputter installations with each installation including two cathodes, of which the one cathode is connected to a pole of an AC voltage and the other cathode to the other pole of this AC voltage. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Milde et al., by using the power supply device of Berthaud et al. to supply power to the sputter installation of Milde et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Katz (US 4,788,449) discloses a redundant power distribution wherein electrical power consuming modules are are connected to individual power supplies in such a way so that a load can still be supplied with power such one power cell fail. Katz further discloses that each cell can supply either AC or DC current.

Kinnard (US 2003/0168913) discloses a power system with load matrix wherein each load is coupled to a power supply matrix to provide redundancy in the system.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SAB
7/21/2006

CHAU N. NGUYEN
PRIMARY EXAMINER